NETGEAR®

ReadyNAS 300/500 Series Network Attached Storage (NAS)

Data Sheet

RN312/RN314/RN316/RN516

RN314/RN516/RN312

ReadyNAS: Storage Made Easy

Application data, virtual images, client files, email... the types of data central to running a successful business can seem endless. With ReadyNAS you finally have an advanced and easy-to use solution for centralizing, securing and controlling access to your digital assets. Way more than just simple unified (NAS and SAN) storage for your company, ReadyNAS allows you to do more than you ever thought you could afford by pairing the latest in performance with innovative efficiency technologies such as unlimited snapshots, thin provisioning and cloud-managed replication.

Every networked attached storage (NAS) device from NETGEAR runs on the revolutionary ReadyNAS operating system. This custom-built OS protects stored data not only with XRAID2 automatic expansion, but is the first desktop NAS for the SMB to feature the continuous data protection of unlimited snapshots along with real-time anti-virus and native encryption. Designed specifically for the unique needs of small business users, ReadyNAS devices utilize proprietary ReadyCLOUD technology for cloud-based discovery, provisioning and even ongoing management. In addition, these new devices are virtualization-ready with iSCSI support, thin provisioning capability and certification with VMware and Microsoft.

These days, your data is your world. With ReadyNAS, protecting and accessing that world has never been easier. ReadyNAS — Storage Made EASY.

Key Business Features

- **Unlimited Snapshots:** Unlimited data snapshot capability for on-box protection and flexible data recovery
- **XRAID2 & Instant Provisioning:** Easily expand capacity and feel confident knowing that data is always protected
- **Cloud-managed Replication:** Maintain data sets in multiple locations or ensure protection of data from remote or branch office locations
- **iSCSI and Thin Provisioning:** Powerful tools for a businesses taking advantage of virtual infrastructures
- **Anti-virus & Encryption:** Keep data protected from outside threats and safe from prying eyes
- **Modern GUI and ReadyCLOUD Management:** Sleek, modern interface that puts the tools you need, where and when you need them

Key Business Solutions

- **File Server:** Unified storage platform for sharing files between Windows, Mac and Linux-based computers
- **Backup:** RAID redundancy with automatic expansion and unlimited data snapshots for point-in-time restore
- **Disaster Recovery:** Cloud-managed replication for maintaining multiple sets of data and performing easy restores in case of disaster
- **Virtualization:** Thin provisioning, iSCSI support and certified with VMware and Microsoft

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ReadyNAS Desktop Model Comparison – 300/500 Series

	ReadyNAS 312	ReadyNAS 314	ReadyNAS 316	ReadyNAS 516
CPU	Intel® Atom 2.1GHz dual core	Intel® Atom 2.1GHz dual core	Intel® Atom 2.1GHz dual core	Intel® Ivy Bridge Core i3-3220 3.3GHz dual core
Memory	2GB	2GB	2GB	4GB ECC
Drive Bays	2	4	6	6
Drive Types Supported	SATA/SSD 2.5" or 3.5"	SATA/SSD 2.5" or 3.5"	SATA/SSD 2.5" or 3.5"	SATA/SSD 2.5" or 3.5"
Hot Swappable Drives	Yes	Yes	Yes	Yes
Tool-less 3.5" Disk Installation	Yes	Yes	Yes	Yes
eSATA Expansion Ports	1	2 (1 Shared USB/ eSATA port)	2	3
Total Solution Capacity Internal/ with optional EDA500 unit(s)	8TB / 28TB	16TB / 56TB	24TB / 64TB	24TB / 84TB
Gigabit LAN Ports	2	2	2	2
Optional 10Gbps LAN	No	No	No	Yes
USB Ports	One (1) USB 2.0, Two (2) USB 3.0	One (1) USB 2.0, Two (2) USB 3.0	One (1) USB 2.0, Two (2) USB 3.0	One (1) USB 2.0, Two (2) USB 3.0
HDMI Port	1	1	1	1
Power Supply	12V, 5A External 60W: input 100-240V AC, 50/60Hz	12V, 7A External 90W; input 100-240V AC, 50-60Hz	Internal 200W; input 100-240V AC, 50-60Hz	Internal 200W; input 100-240V AC, 50-60Hz
BTU at Full Power Supply Utilization	51W	69W	111W	189W
Power Consumption: Operation	35W	49W	55W	88W
Power Consumption (Wake on LAN)	627mW	843mW	804mW	956mW
Power Consumption: Power Off	266mW	472mW	338mW	370mW
Chassis Warranty*	5 years	5 years	5 years	5 years
2-Line LCD Display	No	Yes	Yes	Yes
Touch Screen Navigation	No	No	Yes	Yes
Fan (mm)	92	92	120	120
Dimensions DxWxH (mm)	220 x 101 x 142	223 x 134 x 205	287.5 x 192 x 259	287.5 x 192 x 259
Weight (kg)	2.22	3.97	7.53	7.97
ProSupport Service Packs Available	300 Series			500 Series
OnCall 24x7	1-year: PMB0312, 3-year: PMB0332, 5-year: PMB0352			1-year: PMB0313, 3-year: PMB0333 5-year: PMB0353
XpressHW Replacement	3-year: PRR0332, 5-year: PRR0352			3-year: PRR0333, 5-year: PRR0353

Technical Specifications

Data Protection (Backup & Replication)

- Unlimited block-based snapshots for continuous data protection.
- Restore Snapshots to any point in time.
- Restore Snapshot data from local admin GUI, ReadyCLOUD, or native Windows File Explorer
- Scheduled and manual snapshots
- rsync
- Encrypted Remote Replication
- Cloud managed Remote Replication (ReadyNAS to ReadyNAS). No licenses required for ReadyNAS OS 6 devices.
- AES 256-bit volume based encryption
- X-RAID2 (automatic single volume online expansion)
- Single Disk, JBOD
- RAID Levels: 0, 1, 5, 6, 10 (RAID level support depends on number of drives/bays)
- RAID Global Hot Spare
- eSATA Expansion
- Backup to external storage (USB/eSATA)
- USB One-Touch Copy
- Apple Time Machine support
- Remote Apple Time Machine backup and restore (over ReadyNAS Remote)
- ReadyNAS Vault Cloud backup (optional service)
- ReadyDROP file synchronization (sync folder on Mac/Windows to a folder on ReadyNAS)
- DropBox file synchronization (requires DropBox account)
- Real-time Anti-Virus scanning using signature and heuristic algorithms. (No end-user licenses required) Protection for viruses, malware, worms, and Trojans

Storage Area Networks (SAN), Virtualization

- Unlimited iSCSI LUN Snapshot
- Thin or Thick provision LUNs
- Multi-LUN per target
- LUN mapping
- LUN masking
- SPC-3 Persistent Reservation (iSCSI)
- MPIO (iSCSI)
- MC/S (iSCSI)
- Max # iSCSI Target: 256
- Max # iSCSI LUN: 256
- VMware vSphere 5
- Citrix XenServer 6
- Windows Server 2008 Hyper-V
- Windows Server 2008 Failover Clustering
- Windows Server 2012

Hardware

- Floating Point CPU
- Flash: 128MB for OS
- Extra RAM slot (RN516 only)
- Dual Gigabit Ethernet ports with link aggregation and failover
- Universal Infrared Remote Receiver (ReadyNAS 300 and 500 Series only)
- Programmable One-Touch USB Backup button
- Kensington Security Lock Feature
- LEDs: Power, Activity, Disk, Backup, LAN
- Power cord localized to country of sale
- Touch Screen Navigation (RN316, RN516)

ReadyCLOUD (cloud access to ReadyNAS)

- ReadyCLOUD portal based data access and management
- VPN quality remote data transfer and management
- Share data with friends & co-workers directly from portal

Remote Access Clients

- ReadyNAS Remote clients for Apple Mac OS X, Microsoft Windows, Android, Apple iOS (Remote file access and management client)
- VPN quality remote data transfer and management
- Simple remote access through ReadyNAS Remote (no firewall or router configuration needed)
- ReadyDROP file synchronization (sync folder on Mac/Windows to a folder on ReadyNAS)

File System & Transfer Protocols

- ReadyNAS OS 6
- Linux 3.x
- Internal File System: BTRFS
- External File System: EXT3, EXT4, NTFS, FAT32, HFS+
- Copy-on-write filesystem
- Microsoft Network (CIFS/SMB3)
- Apple OS X (AFP 3.3)
- Linux/Unix (NFS v3)
- Internet (HTTP)
- Secure Internet (HTTPS)
- File Transfer Protocol (FTP)
- FTP over SSL / TLS (explicit)
- FTP Passive mode with port range setup
- FTP Bandwidth control
- FTP Anonymous
- FTP Transfer Log
- Secure Shell (SSH)
- SSH File Transfer Protocol (SFTP)
- Web Authoring (WebDAV)
- Storage Array Network (iSCSI)
- File Synchronization (rsync)
- Local web file manager

Users/Groups

- Max # Users: 8192
- Max # User Groups: 8192
- Max # Share Folder: 1024
- Max # Concurrent Connections: 1024
- Share Folder Level ACL Support
- Advanced Folder Permissions with Subfolder ACL support for CIFS/SMB, AFP, FTP
- Microsoft Active Directory (AD) Domain Controller Authentication
- Local access list
- ReadyCLOUD based ACL
- Domain user login via CIFS/SMB, AFP, FTP

Management

- ReadyCLOUD cloud based discovery and management
- RAIDar local discovery agent (Windows/Mac)
- Save and restore system configuration (clone devices)
- Local event log
- Send events to SYSLOG server
- Connection reporting (SMB)
- Local Graphical User Interface (GUI) Languages: English, German, French, Japanese, Chinese, Russian, Swedish, Portuguese, Italian, Spanish, Polish, Czech, Dutch, Korean
- Genie+ marketplace integration to add productivity, media, backup, surveillance and other applications
- Unicode support
- Volume Management
- Thin provision Shares and LUNs

Technical Specifications

- Instant Provisioning/Expansion with data protection
- Restore to factory default
- Supported Operating Systems (Microsoft Windows Vista (32/64-bit), 7 (32/64-bit), 8 (32/64-bit), Microsoft Windows Server 2008 R2/2012, Apple OS X, Linux/Unix, Solaris, Apple iOS, Google Android)
- Supported Web Browsers (Microsoft Internet Exploer 9+, Mozilla Firefox 14+, Google Chrome 20+, Apple Safari 5+)

System Monitoring

- Device capacity, performance, resource and health monitoring
- Bad block scan
- Hard Drive S.M.A.R.T.
- File System Check
- Disk Scrubbing
- Disk Defragment
- Alerts (SMTP email, LCD, SNMP, syslog, local log)
- Auto-shutdown (hard drive, fan, UPS)
- Auto-restart on power recovery

Networking Protocols

- TCP/IP
- IPv4
- Next-generation Internet Protocol (IPv6)
- Static IP Address
- Dynamic IP Address
- Multiple IP Settings
- DHCP Client
- UPnP Discovery
- Bonjour Discovery
- Link Aggregation IEEE 802.3ad
- Port Trunking (balanced round robin, active backup, balance xor, broadcast, 802.3ad link aggregation LACP, transmit load balancing, adaptive load balancing)
- Hash Types IEEE 802.3ad LACP or XOR (Layer 2, Layer3, Layer 4)
- Jumbo Frames
- Virtual LAN (VLAN)
- SSH
- SNMP v2, v3
- Network Time Protocol (NTP)

Media

- ReadyDLNA (UPnP DLNA Media Server)
- ReadyDLNA Streams to any compliant device including PS3/Xbox 360
- ReadyDLNA mobile clients for remote media streaming (iOS, Android)
- ReadyDLNA supported music formats (wav, wma, pcm, ogg, mp3, m4a, flac, aac)
- ReadyDLNA supported photo formats (jpg, jpeg)
- ReadyDLNA supported video formats (3gp, mp4, wmv, xvid, vob, ts, tivo, mts, mpeg, mpg, mp4, mov, mkv, m4v, m4p, m2t, m2ts, flv,flc, fla, divx, avi, asf)
- ReadyDLNA supported playlist formats (pls, m3u)
- ReadyNAS Surveillance (free trial, license required) supports over 40 brands and 1000 models of IP cameras
- iTunes Server
- iTunes supported audio formats (mp3, m4a, m4p, wav, aif)
- iTunes supported video formats (m4v, mov, mp4)
- iTunes supported playlist formats (m3u, wpl)
- TiVo Archiving
- Plex Media Server streams to DLNA and Plex clients (mobile, desktop, Google TV, Roku, Samsung & LG TVs)

Compliance

- ENGR 10049 EST Environmental Stress Test Guideline
- ENGR 10045 EVT Engineering Validation Test Guideline
- ENGR 10048 CVT Compliance Validation Test Guideline
- ENGR 10046 SVT System Validation Test Guideline
- ENGR 10023 HALT Highly Accelerated Life Test Guideline
- ENGR 10036 CDG Component Derating Guideline

Environment

- Noise levels: <28dBA (ReadyNAS 516), <25dBA (all other units)
- Operating Temperature: 0°-40° C
- Operating Humidity: 5-95% relative humidity, non-condensing
- Smart Fan
- Scheduled Power on/off
- UPS Support
- Network UPS with SNMP Management
- Wake on LAN
- Schedule power on/off
- Auto-power on (after shutdown)
- HDD Spin Down
- AC Input Power Voltage 100V to 240V
- Power Frequency: 50Hz to 60Hz, Single Phase
- Certification: FCC Class B, CE Class B, RoHS, VCCI Class B

*The 5-Year Hardware Warranty only covers hardware, fans, and internal power supplies, and does not include external power supplies or software. Hardware modifications or customization void the warranty. The warranty is only valid for the original purchaser and cannot be transferred.

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